STATE OF IDAHO
DEPARTMENT OF
ENVIRONMENTAL QUALITY

1410 North Hilton • Boise, Idaho 83706-1255 • (208) 373-0502

Dirk Kempthorne, Governor
C. Stephen Allred, Director

September 23, 2003

Certified Mail No. 7099 3220 0009 1975 0771

Monty Johnson, Environmental Manager
Nu-West Industries, Inc.
Agrium Conda Phosphate Operations
3010 Conda Road
Soda Springs, ID 83276

RE: AIRS Facility No. 029-00003, Nu-West Industries Inc., Conda
Final Amended Tier I Operating Permit

Dear Mr. Johnson:

The Idaho Department of Environmental Quality (DEQ) is issuing an amended Tier I Operating Permit No. 029-00003 for Nu-West Industries Inc. in accordance with the Title V of the Clean Air Act and IDAPA 58.01.01.300 through 386, *Rules for the Control of Air Pollution in Idaho (Rules).*

The enclosed operating permit is based on the information contained in your permit application received on May 30, 2003 to terminate PTC No. 0029-0003, issued on August 7, 1992, for the Experimental Silica Plant and to revise the facility Tier I operating permit upon PTC termination. The basis of the request is that the Experimental Silica Plant no longer operates and there are no plans for its future use. On August 20, 2003, DEQ notified Agrium that the PTC was terminated.

Larry Sims of the Pocatello Regional Office will contact you regarding a meeting with the Department to discuss the permit terms and requirements. In addition to your facility's plant manager, DEQ recommends the following representatives attend the meeting: your responsible official, environmental contact, and any operations staff responsible for day-to-day compliance with the permit conditions.

You, as well as any other entity, may have the right to appeal this final agency action pursuant to IDAPA 58.01.23 *(Rules of Administrative Procedure Before the Board of Environmental Quality)*. A petition may be filed with the Hearings Coordinator, Department of Environmental Quality, 1410 N. Hilton, Boise, ID 83706-1255, within 35 days of the date of this decision. However, prior to filing a petition for a contested case, DEQ encourages you to contact Mike Simon at (208) 373-0502 or msimon@deq.state.id.us to address any questions or concerns you may have with the enclosed permit.

Sincerely,

Martin Bauer

Martin Bauer, Administrator
Air Quality Division

MB/MS/sd
Enclosure

Project No. T1-030319

cc: Tiffany Floyd, Pocatello Regional Office
Sherry Davis, Source File
Laurie Kral, EPA Region 10
Mike Simon, Regional Permit Coordinator
Pat Rayne AFS
Marilyn Seymore, PB
Joan Lechtenberg, Public Comment
Phyllis Heitman (Ltr Only)
Reading File (Ltr Only)

Air Quality
TIER I OPERATING PERMIT

State of Idaho
Department of Environmental Quality

PERMIT NO.: T1-030319

AIRS FACILITY NO.: 029-00003

AQCR: 61 **CLASS:** A

SIC: 2874 **ZONE:** 12

UTM COORDINATE (km): 455.8 , 4731.8

1. **PERMITTEE**
   Nu-West Industries, Inc.; Agrium Conda Phosphate Operations

2. **PROJECT**
   Tier I Operating Permit

3. **MAILING ADDRESS**	**CITY**	**STATE**	**ZIP**
3010 Conda Road	Soda Springs	ID	83276

4. **FACILITY CONTACT**	**TITLE**	**TELEPHONE**
Monty Johnson	Environmental Manager	(208) 547-4381

5. **RESPONSIBLE OFFICIAL**	**TITLE**	**TELEPHONE**
Charles H. Ross	General Manager	(208) 547-4381

6. **EXACT PLANT LOCATION**	**COUNTY**
7 miles north of Soda Springs, 1.2 miles east of Highway 34	Caribou

7. **GENERAL NATURE OF BUSINESS & KINDS OF PRODUCTS**
   Phosphate-based fertilizer products

8. **PERMIT AUTHORITY**

This Tier I operating permit is issued pursuant to Idaho Code §39-115 and the *Rules for the Control of Air Pollution in Idaho*, IDAPA 58.01.01.300 through 386. The permittee shall comply with the terms and conditions of this permit.

This permit incorporates all applicable terms and conditions of prior air quality permits issued by the Department of Environmental Quality (DEQ) for the permitted source, unless the permittee emits toxic pollutants subject to State-only requirements pursuant to IDAPA 58.01.01.210, and the permittee elects not to incorporate those terms and conditions into this operating permit.

The effective date of this permit is the date of signature by the DEQ on the cover page.

C. STEPHEN ALLRED, DIRECTOR
DEPARTMENT OF ENVIRONMENTAL QUALITY

DATE ISSUED: **September 23, 2003**

DATE EXPIRES: **October 28, 2006**

Table of Contents

Acronyms, Units, And Chemical Nomenclature

acfm	actual cubic feet per minute
AIRS	Aerometric Information Retrieval System
AQCR	Air Quality Control Region
ASTM	American Society of Testing and Materials
CFR	Code of Federal Regulations
CO	carbon monoxide
DEQ	Department Environmental Quality
dscf	dry standard cubic feet
EPA	U.S. Environmental Protection Agency
gpm	gallons per minute
gr	grain (1 lb = 7,000 grains)
gr/dscf	grains per dry standard cubic foot
HAPs	hazardous air pollutants
IDAPA	a numbering designation for all administrative rules in Idaho promulgated in accordance with the Idaho Administrative Procedures Act
km	kilometer
lb/hr	pound per hour
MACT	Maximum Available Control Technology
MMBtu/hr	million British thermal units per hour
NESHAP	Nation Emission Standards for Hazardous Air Pollutants
NO_X	nitrogen oxides
NSPS	New Source Performance Standards
O&M	operations and maintenance
P_2O_5	phosphorous pentoxide
PM	particulate matter
PM_{10}	particulate matter with an aerodynamic diameter of 10 micrometers or less
ppm	parts per million
PSD	Prevention of Significant Deterioration
PTC	permit to construct
PW	process weight
RMP	Risk Management Plan
SIC	Standard Industrial Classification
SCC	Source Classificaiton Code
scf	standard cubic feet
SIP	State Implementation Plan
SO_2	sulfur dioxide
T/yr	tons per year
U.S.C.	United States Code
VOC	volatile organic compound

1. FACILITY-WIDE CONDITIONS

The following requirements apply generally to emissions units at the facility.

Table 1.1 FACILITY-WIDE APPLICABLE REQUIREMENTS SUMMARY

Permit Conditions	Parameter	Permit Limit / Standard Summary	Applicable Requirements Reference	Monitoring and Record-keeping Requirements
1.1	Fugitive emissions	Reasonable precautions	IDAPA 58.01.01.650-651	1.2, 1.3, 1.4, 1.11
1.5	Odorous gases, liquids, or solids	No emissions that cause air pollution	IDAPA 58.01.01.775-776	1.6, 1.11
1.7	Visible emissions	20% opacity for no more than three minutes in any 60-minute period	IDAPA 58.01.01.625	1.8, 1.11
1.9	Excess emissions	Compliance with IDAPA 58.01.01.130-136	IDAPA 58.01.01.130	1.9-1.9.5, 1.11
1.12	Open burning	In accordance with IDAPA 58.01.01.600-616	IDAPA 58.01.01.600-616	1.11
1.13	Asbestos	Compliance with 40 CFR 61, Subpart M	40 CFR 61, Subpart M	1.11, 1.13
1.14	Accidental release prevention	Compliance with 40 CFR 68.215(a)(2)	40 CFR 68.10(a)	1.11, 1.14
1.15	PM_{10}, PM, NO_X, SO_2, CO, VOC, opacity	Test methods	IDAPA 58.01.01.157	1.11, 1.16
1.17	Fuel-burning equipment PM standard	Grain-loading	IDAPA 58.01.01.676-677	1.17.1, 1.11
1.18, 1.19	Fuel sulfur content	Fuel Oil ASTM grade No. 1 – 0.3% by weight ASTM grade No. 2 – 0.5% by weight Coal 1% by weight	IDAPA 58.01.01.728 and 729	1.11, 1.20
1.21	Recycling and emissions reduction	Reduce emissions of Class I and Class II refrigerants in accordance with 40 CFR 82, Subpart F	40 CFR 82, Subpart F	1.11, 1.21
1.22	Fugitive dust emissions	Visible emissions at property boundary not to exceed 3 minutes in any 60-minute period	PTC No. 029-00003; Permit Condition 1.2, 7/12/02	1.2, 1.3, 1.4, 1.11
1.23	Fluoride emissions	0.3 pounds fluoride per ton P_2O_5 input	IDAPA 58.01.01.75, 5/01/94	1.24
1.25	Operation of ambient monitors	Operate 2 PM_{10} and 1 SO_2 monitors	Consent Order, Condition 10, 10/24/73'	1.10, 1.26

Fugitive Emissions

1.1 All reasonable precautions shall be taken to prevent PM from becoming airborne in accordance with IDAPA 58.01.01.650-651.

[IDAPA 58.01.01.650, 651, 5/1/94]

1.2 The permittee shall monitor and maintain records of the frequency and the method(s) used (i.e., water, chemical dust suppressants, etc.) to reasonably control fugitive emissions.

[IDAPA 58.01.01.322.06, 07, 5/1/94]

1.3 The permittee shall maintain records of all fugitive dust complaints received. The permittee shall take appropriate corrective action as expeditiously as practicable after a valid complaint is received. The records shall include, at a minimum, the date that each complaint was received and a description of the following: the complaint, the permittee's assessment of the validity of the complaint, any corrective action taken, and the date the corrective action was taken.

[IDAPA 58.01.01.322.06, 07, 5/1/94]

1.4 The permittee shall conduct a monthly facility-wide inspection of potential sources of fugitive emissions, during daylight hours and under normal operating conditions, to ensure that the methods used to reasonably control fugitive emissions are effective. If fugitive emissions are not being reasonably controlled, the permittee shall take corrective action as expeditiously as practicable. The permittee shall maintain records of the results of each monthly fugitive emission inspection. The records shall include, at a minimum, the date of each inspection and a description of the following: the permittee's assessment of the conditions existing at the time fugitive emissions were present (if observed), any corrective action taken in response to the fugitive emissions, and the date the corrective action was taken.

[IDAPA 58.01.01.322.06, 07, 5/1/94; IDAPA 58.01.01.322.08, 4/5/00]

Odors

1.5 No person shall allow, suffer, cause, or permit the emission of odorous gases, liquids, or solids to the atmosphere in such quantities as to cause air pollution.

[IDAPA 58.01.01.775-776, 5/1/94]

1.6 The permittee shall maintain records of all odor complaints received. If the complaint has merit, the permittee shall take apropriate corrective action as expeditiously as practicable. The records shall include, at a minimum, the date that each complaint was received and a description of the following: the complaint, the permittee's assessment of the validity of the complaint, any corrective action taken, and the date the corrective action was taken.

[IDAPA 58.01.01.322.06, 07 (state-only), 5/1/94]

Visible Emissions

1.7 No person shall discharge any air pollutant to the atmosphere from any point of emission for a period or periods aggregating more than three minutes in any 60-minute period which is greater than 20% opacity as determined by procedures contained in IDAPA 58.01.01.625. These provisions shall not apply when the presence of uncombined water, nitrogen oxides, and/or chlorine gas are the only reason(s) for the failure of the emission to comply with the requirements of this section.

[IDAPA 58.01.01.625, 4/5/00]

1.8 In addition to the specific requirements in Permit Conditions 4.7.3 and 7.8.2, the permittee shall conduct a monthly facility-wide visible emission inspection of potential sources of visible emissions during daylight hours and under normal operating conditions. The visible emissions inspection shall consist of a see/no see evaluation for each potential source. If any visible emissions are present from any point of emission, the permittee shall either take appropriate corrective action as expeditiously as practicable, or perform a Method 9 opacity test in accordance with the procedures outlined in IDAPA 58.01.01.625. A minimum of 30 observations shall be recorded when conducting the opacity test. If opacity is greater than 20% for a period or periods aggregating more than three minutes in any 60-minute period, the permittee shall take all necessary corrective action and report the exceedance in its annual compliance certification and in accordance with IDAPA 58.01.01.130-136. The permittee shall maintain records of the results of each monthly visible emission inspection and each opacity test when conducted. The records shall include, at a minimum, the date and results of each inspection and test and a description of the following: the permittee's assessment of the conditions existing at the time visible emissions are present (if observed), any corrective action taken in response to the visible emissions, and the date corrective action was taken.

[IDAPA 58.01.01.322.06, 07, 5/1/94; IDAPA 58.01.01.322.08, 4/5/00]

Excess Emissions

1.9 In addition to the specific requirements in Permit Conditions 2.17.2, 5.22.2, and 6.27.2, the permittee shall comply with the procedures and requirements of IDAPA 58.01.01.130-136 for excess emissions. The provisions of IDAPA 58.01.01.130-136 shall govern in the event of conflicts between Permit Condition 1.9 and the regulations of IDAPA 58.01.01.130-136.

1.9.1 The person responsible for or in charge of a facility during an excess emissions event shall, with all practicable speed, initiate and complete appropriate and reasonable action to correct the conditions causing such excess emissions event, to reduce the frequency of occurrence of such events, to minimize the amount by which the emission standard is exceeded, and shall, as provided below or upon request of DEQ, submit a full report of such occurrence including a statement of all known causes and of the scheduling and nature of the actions to be taken.

[IDAPA 58.01.01.132, 4/5/00]

1.9.2 In all cases where startup, shutdown, or scheduled maintenance of any equipment or emission unit is expected to result or results in an excess emissions event, the owner or operator of the facility or emissions unit generating the excess emissions shall demonstrate compliance with IDAPA 58.01.01.133.01(a) through (d), including, but not limited to:

[IDAPA 58.01.01.133, 4/5/00]

- A prohibition of any scheduled startup, shutdown, or maintenance resulting in excess emissions shall occur during any period in which an Atmospheric Stagnation Advisory and/or a Wood Stove Curtailment Advisory has been declared by DEQ; and

[IDAPA 58.01.01.133.01.a, 3/20/97]

- Notifying DEQ of the excess emissions event as soon as reasonably possible, but no later than two hours prior to the start of the excess emission event unless the owner or operator demonstrates to DEQ's satisfaction that a shorter advanced notice was necessary.

[IDAPA 58.01.01.133.01.b, 4/5/00]

- The owner or operator of a source of excess emissions shall report and record the information required pursuant to Permit Conditions 1.9.4 and 1.9.5 and IDAPA 58.01.01.135 and 136 for each excess emissions event due to startup, shutdown, or scheduled maintenance.

[IDAPA 58.01.01.133.01.c, 3/20/97]

1.9.3 In all cases where upset or breakdown of equipment or an emissions unit, or the initiation of safety measures, results or may result in an excess emissions event, the owner or operator of the facility or emissions unit generating the excess emissions shall demonstrate compliance with IDAPA 58.01.01.134.01(a) and (b) and the following:

[IDAPA 58.01.01.134, 4/5/00]

1.9.3.1 For all equipment or emissions units from which excess emissions result during upset or breakdown conditions, or for other situations that may necessitate the implementation of safety measures which cause excess emissions, the facility owner or operator shall comply with the following:

[IDAPA 58.01.01.134.02, 4/5/00]

- The owner or operator shall immediately undertake all appropriate measures to reduce and, to the extent possible, eliminate excess emissions resulting from the event and to minimize the impact of such excess emissions on the ambient air quality and public health.

[IDAPA 58.01.01.134.02.a, 4/5/00]

- The owner or operator shall notify DEQ of any upset, breakdown, or safety event that results in excess emissions. Such notification shall identify the time, specific location, equipment or emissions unit involved, and (to the extent known) the cause(s) of the occurrence. The notification shall be given as soon as reasonably possible, but no later than 24 hours after the event, unless the owner or operator demonstrates to DEQ's satisfaction that the longer reporting period was necessary.

[IDAPA 58.01.01.134.02.b, 4/5/00]

- The owner or operator shall report and record the information required pursuant to Permit Conditions 1.9.4 and 1.9.5 and IDAPA 58.01.01.135 and 136 for each excess emissions event caused by an upset, breakdown, or safety measure.

[IDAPA 58.01.01.134.02.c, 3/20/97]

1.9.3.2 During any period of excess emissions caused by upset, breakdown, or operation under facility safety measures, DEQ may require the owner or operator to immediately reduce or cease operation of the equipment or emissions unit causing the excess emissions until such time as the condition causing the excess emissions has been corrected or brought under control. Such action by DEQ shall be taken upon consideration of the factors listed in IDAPA 58.01.01.134.03 and after consultation with the facility owner or operator.

[IDAPA 58.01.01.134.03 4/5/00]

1.9.4 A written report for each excess emissions event shall be submitted to DEQ by the owner or operator no later than 15 days after the beginning of such an event. Each report shall contain the information specified in IDAPA 58.01.01.135.02.

[IDAPA 58.01.01.135.01, 3/20/97; IDAPA 58.01.01.135.02, 4/5/00]

1.9.5 The owner or operator shall maintain excess emissions records at the facility for the most recent five-calendar-year period. The excess emissions records shall be made available to DEQ upon request. The excess emissions records shall include the information requested by IDAPA 58.01.01.136.03(a) and (b) as summarized in the following:

[IDAPA 58.01.01.136.01, 02, 3/20/97; IDAPA 58.01.01.136.03, 4/5/00]

- An excess emissions record book for each emissions unit or piece of equipment containing copies of all reports that have been submitted to DEQ pursuant to IDAPA 58.01.01.135 for the particular emissions unit or equipment; and

[IDAPA 58.01.01.136.03.a, 4/5/00]

- Copies of all startup, shutdown, and scheduled maintenance procedures and upset, breakdown, or safety preventative maintenance plans which have been developed by the owner or operator in accordance with IDAPA 58.01.01.133 and 134, and facility records as necessary to demonstrate compliance with such procedures and plans.

[IDAPA 58.01.01.136.03.b, 3/20/97; IDAPA 58.01.01.130-136, 4/5/00 (state-only, federally-enforceable upon approval into the SIP); IDAPA 58.01.01.322.08.b, 3/23/98]

Reports and Certifications

1.10 All periodic reports and certifications required by this permit shall be submitted to DEQ within 30 days of the end of each specified reporting period. Excess emissions reports and notifications shall be submitted in accordance with IDAPA 58.01.01.130-136.

Reports, certifications, and notifications shall be submitted to:

Air Quality Permit Compliance
Department of Environmental Quality
Pocatello Regional Office
444 Hospital Way, #300
Pocatello, ID 83201
Phone: (208) 236-6160
Fax: (208) 236-6168

The periodic compliance certification required by General Provision 21 shall also be submitted within 30 days of the end of the specified reporting period to:

EPA Region 10
Air Operating Permits, OAQ-107
1200 Sixth Ave.
Seattle, WA 98101

[IDAPA 58.01.01.322.08, 11, 5/1/94]

Monitoring and Recordkeeping

1.11 The permittee shall maintain sufficient recordkeeping to assure compliance with all of the terms and conditions of this operating permit. Recording of monitoring information shall include, but not be limited to the following: (a) the date, place, and times of sampling or measurements; (b) the date analyses were performed; (c) the company or entity that performed the analyses; (d) the analytical techniques or methods used; (e) the results of such analyses; and (f) the operating conditions existing at the time of sampling or measurement. All monitoring records and support information shall be retained for a period of at least five years from the date of the monitoring sample, measurement, report, or application. Supporting information includes, but is not limited to, all calibration and maintenance records, all original strip-chart recordings for continuous monitoring instrumentation, and copies of all reports required by this permit. All records required to be maintained by this permit shall be made available in either hard copy or electronic format to Department representatives upon request.

[IDAPA 58.01.01.322.07, 5/1/94]

Open Burning

1.12 The permittee shall comply with the requirements of IDAPA 58.01.01.600-616, *Rules for Control of Open Burning.*

[IDAPA 58.01.01.600-616, 5/1/94]

Renovation/Demolition

1.13 The permittee shall comply with all applicable portions of 40 CFR 61, Subpart M when conducting any renovation or demolition activities at the facility.

[40 CFR 61, Subpart M]

Regulated Substances for Accidental Release Prevention

1.14 This facility is subject to Part 68 and shall certify compliance with all requirements of 40 CFR 68, including the registration and submission of the RMP, as part of the annual compliance certification required by 40 CFR 70.6(c)(5).

[40 CFR 68.215(a)(2); IDAPA 58.01.01.322.11, 5/1/94; 40 CFR 68.215(a)(ii)]Test Methods

1.15 If testing is required, the permittee shall use the following test methods described in Table 1.2 to measure the pollutant emissions.

Table 1.2 EPA REFERENCE TEST METHODS

Pollutants	Test Method*	Special Conditions
PM_{10}	EPA Method 201.a EPA Method 202	
PM	EPA Method 5	
NO_X	EPA Method 7	
SO_2	EPA Method 6	
CO	EPA Method 10	
VOC	EPA Method 25	
Opacity	EPA Method 9	If an NSPS source, IDAPA 58.01.01.625 and Method 9; otherwise, IDAPA 58.01.01.625 only.

* Or Department-approved alternative in accordance with IDAPA 58.01.01.157

Compliance Testing

1.16 If testing is required, the permittee shall provide notice of intent to test to DEQ at least 15 days prior to the scheduled test or shorter time period as provided in a permit, order, consent decree, or by Department approval. DEQ may, at its option, have an observer present at any emissions tests conducted on a source. DEQ requests that such testing not be performed on weekends or state holidays.

All testing shall be conducted in accordance with the procedures in IDAPA 58.01.01.157. Without prior Department approval, any alternative testing is conducted solely at the permittee's risk. If the permittee fails to obtain prior written approval by DEQ for any testing deviations, DEQ may determine that the testing does not satisfy the testing requirements. Therefore, prior to conducting any compliance test, the permittee is encouraged to submit in writing to DEQ, at least 30 days in advance, the following for approval:

- The type of test method to be used
- Any extenuating or unusual circumstances regarding the proposed test
- The proposed schedule for conducting and reporting the test

Within 30 days following the date in which a compliance test required by this permit is concluded, the permittee shall submit to DEQ a compliance test report for the respective test. The compliance test report shall include all process operating data collected during the test period as well as the test results, raw test data, and associated documentation, including any approved test protocol.

The proposed test date(s), test date rescheduling notice(s), compliance test report, and all other correspondence shall be sent to:

Air Quality Permit Compliance
Department of Environmental Quality
Pocatello Regional Office
444 Hospital Way, # 300
Pocatello, ID 83201
Phone: (208) 236-6160
Fax: (208) 236-6168

[IDAPA 58.01.01.157, 4/5/00; IDAPA 58.01.01.322.06, 08.a, 09, 5/1/94]

Fuel-burning Equipment

1.17 The permittee shall not discharge to the atmosphere from any fuel-burning equipment particulate matter in excess of 0.015 gr/dscf of effluent gas corrected to 3% oxygen by volume for gas.

[IDAPA 58.01.01.676-677, 5/1/94]

1.17.1 The boilers and heaters not listed as insignificant emission units (Section 9) shall be fired on natural gas exclusively.

[IDAPA 58.01.01.322.01, 3/19/99]

Sulfur Content

1.18 No person shall sell, distribute, use, or make available for use any distillate fuel oil containing more than the following percentages of sulfur:

- ASTM Grade 1 fuel oil - 0.3% by weight.
- ASTM Grade 2 fuel oil - 0.5% by weight.

[IDAPA 58.01.01.728, 5/1/94]

1.19 No person shall sell, distribute, use or make available for use, any coal containing greater than 1% sulfur by weight.

[IDAPA 58.01.01.729, 5/1/94]

1.20 The permittee shall maintain documentation of supplier verification of distillate fuel oil sulfur content and coal sulfur content on an as-received basis.

[IDAPA 58.01.01.322.01, 3/19/99]

Recycling and Emissions Reductions

1.21 The permittee shall comply with applicable standards for recycling and emissions reduction pursuant to 40 CFR 82, Subpart F, Recycling and Emissions Reduction.

[40 CFR 82, Subpart F]

Fugitive Dust Emissions

1.22 Fugitive emissions shall not be observed leaving the property for a period or periods aggregating more than three minutes in any 60-minute period. Fugitive visible emissions shall be determined by EPA Reference Method 22, as described in 40 CFR 60, Appendix A, or by a Department-approved alternative method.

[IDAPA 58.01.01.203.02, 5/1/94; IDAPA 58.01.01.211.01, 5/1/94; PTC No. 029-00003, Permit Condition 1.2, 7/12/00]

Rules for Control of Fluoride Emissions

1.23 No person shall allow, suffer, cause or permit the discharge into the atmosphere of total fluoride emissions in gaseous and in particulate form, expressed as fluoride (F-) from the phosphate fertilizer plant sources in Permit Conditions 2 and 6 in excess of 0.3 pounds of fluoride per ton of P_2O_5 input to the phosphate fertilizer plant, calculated at maximum-rated capacity.

[IDAPA 58.01.01.751.01, 5/1/94]

Monitoring, Testing, and Reporting Requirements

1.24 Compliance with IDAPA 58.01.01.751.01 will be adjudged upon the results of the continuing program of fluoride sampling of potential grazing areas and alfalfa-growing areas conducted by DEQ. Sampling conducted by any person subject to IDAPA 58.01.01.751 may be accepted for determining compliance with IDAPA 58.01.01.751.01 if such sampling is conducted at sites approved by DEQ in advance of sampling, using analytical procedures appearing in the Procedures Manual for Air Pollution Control, Section I (Source Test Methods) or equivalent methods approved by DEQ in advance of sampling. Compliance with IDAPA 58.01.01.751.01 shall be demonstrated by testing methods approved in advance by DEQ. When approved by the Director in advance of sampling, engineering calculations may be submitted in lieu of emission data. Monitoring and reporting requirements shall be included in operating permits granted to each facility.

[IDAPA 58.01.01.751.02, 5/1/94]

Operation of Ambient Monitors

1.25 The permittee shall operate two PM_{10} monitors and one continuous ambient SO_2 monitor at sites approved by DEQ. Results of the above described monitoring shall be submitted to DEQ monthly.

[Consent Order, Condition 10, 10/24/73]

2. GRANULATION PLANT

Summary Description

The following is a narrative description of the dry fertilizer granulation plant regulated in this Tier I operating permit. This description is for informational purposes only.

The granulation plant produces two different grades of dry products. Phosphoric acid from the phosphoric acid plant and ammonia, which is purchased from outside the plant, are the primary raw materials. The basic reaction involved in the different products is the neutralization of the phosphoric acid by the ammonia. This generates a large quantity of heat and is responsible for the steam plume which may be seen exiting the Granulation stack.

At various points in the process, dust, fluorine fumes, or ammonia fumes are generated. A series of scrubbers are used to remove these fumes from the air exiting the plant. Phosphoric acid and water are used as the scrubbing media.

Table 2.1 below describes the devices used to control emissions from the granulation plant.

Table 2.1 EMISSIONS UNITS AND EMISSIONS CONTROL DEVICES

Source Code	Emission Unit(s) / Process(es)	Emission Control Device		Emission Point
S-Fa-1	granulation plant	A-Fa-1a A-Fa-1b	Venturi Scrubber (wet, Phosphoric Acid) Spray tower scrubber (water)	P-Fa-1/2 (Sources Fa-1 and Fa-2 have a common exhaust)
S-Fa-2		A-Fa-2a A-Fa-2b	Multiple Cyclone (dry) Venturi Scrubber (wet, Phosphoric Acid)	
S-Fa-3		A-Fa-3	Baghouse	P-Fa-3

Table 2.2 contains only a summary of the requirements that apply to the granulation plant. Specific permit requirements are listed below Table 2.2.

Table 2.2 APPLICABLE REQUIREMENTS SUMMARY

Permit Conditions	Parameter	Permit Limit / Standard Summary	Applicable Requirements Reference	Operating, Monitoring, and Recordkeeping Requirements
2.1	Fluoride emissions	0.058 lb/ton equivalent P_2O_5 feed	40 CFR 63.622[1]	2.3, 2.4, 2.5, 2.6, 2.7, 2.8, 2.10, 2.11, 2.12, 2.13, 2.15, 2.17, 2.18, 2.19, 2.20, 2.21, 2.22
2.2	Particulate matter	Process weight limitations	IDAPA 58.01.01.701	2.5, 2.9, 2.14, 2.16

[1] If any requirement in this permit conflicts with any requirement contained in 40 CFR 63 the requirement in 40 CFR 63 shall control.

Permit Limits / Standard Summary

2.1 Fluoride - Diammonium and/or Monoammonium Phosphate Process Line

On and after the date on which the performance test required to be conducted by 40 CFR 63.7 and 63.626 is completed, no owner or operator subject to the provisions of 40 CFR 63, Subpart BB shall cause to be discharged into the atmosphere from any affected source any gases which contain total fluorides in excess of 29.0 grams/metric ton of equivalent P_2O_5 feed (0.0580 lb/ton).

[40 CFR 63.623(a); PTC No. 029-00003, pg. 18, Permit Condition 1.1, 7/12/00]

2.2 PM - Process Weight Rate Limitations

No person shall emit into the atmosphere from any process or process equipment commencing operation on or after October 1, 1979, PM in excess of the amount shown by the following equations, where E is the allowable emission from the entire source in pounds per hour, and PW is the process weight in pounds per hour.

a. If PW is less than 9,250 lb/hr,

$$E = 0.045(PW)^{0.6}$$

b. If PW is equal to or greater than 9,250 lb/hr,

$$E = 1.10(PW)^{0.25}$$

[IDAPA58.01.01.701, 4/5/00]

Operating Requirements

2.3 Pressure Drops and Flow Rates for Wet Scrubbers

On or after the date on which the performance test required to be conducted by 40 CFR 63.7 and 63.626 is completed, the owner/operator using a wet scrubbing emission control system must maintain daily averages of the pressure drop across each scrubber and of the flow rate of the scrubbing liquid to each scrubber within the allowable ranges established pursuant to the requirements of 40 CFR 63.625(f)(1) or (2).

[40 CFR 63.624; PTC No. 029-00003, pg. 18, Permit Condition 2.1, 7/12/00]

Monitoring & Recordkeeping Requirements

2.4 Throughput Monitoring Systems

Each owner or operator of a new or existing diammonium and/or monoammonium phosphate process line or granular triple superphosphate process line subject to the provisions of 40 CFR 63, Subpart BB shall install, calibrate, maintain, and operate a monitoring system which can be used to determine and permanently record the mass flow of phosphorus-bearing feed material to the process. The monitoring system shall have an accuracy of ±5% over its operating range.

[40 CFR 63.625(a); PTC No. 029-00003, pg. 18, Permit Condition 3.1, 7/12/00]

2.5 P_2O_5 Throughput

Each owner or operator of a new or existing diammonium and/or monoammonium phosphate process line or granular triple superphosphate process line subject to the provisions of 40 CFR 63, Subpart BB shall maintain a daily record of equivalent P_2O_5 feed by first determining the total mass rate in metric ton/hour of phosphorus bearing feed using a monitoring system for measuring mass flow rate which meets the requirements of 40 CFR 63.625(a) and then by proceeding according to 40 CFR 63.626(c)(3) (Permit Condition 2.13.1(3)).

[40 CFR 63.625(b); PTC No. 029-00003, pg. 18, Permit Condition 3.2, 7/12/00]

2.6 Pressure Drop Across Each Scrubber

Each owner or operator of a new or existing diammonium and/or monoammonium phosphate process line, granular triple superphosphate process line, or granular triple superphosphate storage building using a wet scrubbing emission control system shall install, calibrate, maintain, and operate a monitoring system which continuously measures and permanently records the pressure drop across each scrubber in the process scrubbing system in 15-minute block averages. The monitoring system shall be certified by the manufacturer to have an accuracy of ±5% over its operating range.

[40 CFR 63.625(c)(1); PTC No. 029-00003, pg. 19, Permit Condition 3.3, 7/12/00]

2.7 Liquid Flow Rate of Each Scrubber

Each owner or operator of a new or existing Diammonium and/or Monoammonium phosphate process line, granular triple superphosphate process line, or granular triple superphosphate storage building using a wet scrubbing emission control system shall install, calibrate, maintain, and operate a monitoring system which continuously measures and permanently records the flow rate of the scrubbing liquid to each scrubber in the process scrubbing system in 15-minute block averages. The monitoring system shall be certified by the manufacturer to have an accuracy of ±5% over its operating range.

[40 CFR 63.625(c)(2); PTC No. 029-00003, pg. 19, Permit Condition 3.4, 7/12/00]

2.8 Scrubber Pressure Drop and Liquid Flow Rate Ranges

Following the date on which the performance test required in 40 CFR 63.626 is completed, the owner or operator of a new or existing affected source using a wet scrubbing emission control system and subject to emissions limitations for total fluorides or particulate matter contained in 40 CFR 63, Subpart BB must establish allowable ranges for operating parameters using the methodology specified in either 2.8.1 or 2.8.2.

The allowable range for the daily averages of the pressure drop across each scrubber and of the flow rate of the scrubbing liquid to each scrubber in the process scrubbing system is ±20% of the baseline average value determined as a requirement of 40 CFR 63.626(c)(4) or (d)(4). The Administrator retains the right to reduce the ±20% adjustment to the baseline average values of operating ranges in those instances where performance test results indicate that a source's level of emissions is near the value of an applicable emissions standard, but in no instance shall the adjustment be reduced to less than #10%. The owner or operator must notify the Administrator of the baseline average value and must notify the Administrator each time that the baseline value is changed as a result of the most recent performance

test. When a source using the methodology of this paragraph is retested, the owner or operator shall determine whether new allowable ranges of baseline average values will be based upon the new performance test or (if the new performance test results are within the previously established range) whether there will be no change in the operating parameters derived from previous tests. When a source using the methodology of this paragraph is retested and the performance test results are submitted to the Administrator pursuant to 40 CFR 63.627(c)(1), 63.7(g)(1), and/or 63.10(d)(2), the owner or operator will indicate whether the operating range will be based on the new performance test or the previously established range. If the Administrator has not denied approval of the new operating ranges within 30 days of submission of the performance test results, the new ranges shall be deemed approved and the new baseline value shall then be effective on the 31st day following submission.

2.8.2 The owner or operator of any new or existing affected source shall establish, and provide to the Administrator for approval, allowable ranges for the daily averages of the pressure drop across and of the flow rate of the scrubbing liquid to each scrubber in the process scrubbing system for the purpose of assuring compliance with 40 CFR 63, Subpart BB. Allowable ranges may be based upon baseline average values recorded during previous performance tests using the test methods required in 40 CFR 63.626(c)(4) or (d)(4). As an alternative, the owner or operator can establish the allowable ranges using the results of performance tests conducted specifically for the purposes of this paragraph using the test methods required in 40 CFR 63, Subpart BB and established in the manner required in 40 CFR 63.626(c)(4) or (d)(4). The source shall certify that the control devices and processes have not been modified subsequent to the testing upon which the data used to establish the allowable ranges were obtained. The allowable ranges developed pursuant to the provisions of this paragraph must be submitted to the Administrator for approval. The owner or operator must request and obtain approval of the Administrator for changes to the allowable ranges. When a source using the methodology of this paragraph is retested, the owner or operator shall determine new allowable ranges of baseline average values unless the retest indicates no change in the operating parameters outside the previously established ranges. If the Administrator has not denied approval of the new operating ranges within 30 days of submission of the performance test results, the new ranges shall be deemed approved and the new baseline value shall then be effective on the 31st day following submission.

[40 CFR 63.625(f); PTC No. 029-00003, pg. 19, Permit Condition 3.5, 7/12/00]

2.9 Urea Storage Baghouse Pressure Drop

2.9.1 The permittee shall install, calibrate, maintain, and operate, in accordance with manufacturer specifications, equipment to continuously measure the pressure differential across the baghouse.

2.9.2 The pressure drop across the baghouse shall be maintained within the manufacturer and Operation & Maintenance (O&M) manual specifications when it is operated. Documentation of both the manufacturer's and O&M manual operating pressure drop specifications shall remain onsite at all times and shall be available to Department representatives upon request.

2.9.3 The permittee shall monitor and record the pressure drop across the baghouse on a weekly basis when it is operated.

[IDAPA 58.01.01.211.01, 5/1/94; PTC No. 029-00003, pg. 19, Permit Condition 3.6, 7/12/00]

2.10 Performance Testing for Existing Units

On or before the applicable compliance date in 40 CFR 63.630 and once per annum thereafter, each owner or operator of a phosphate fertilizers production plant subject to the provisions of 40 CFR 63, Subpart BB shall conduct a performance test to demonstrate compliance with the applicable emission standard for each existing diammonium and/or monoammonium phosphate process line. The owner or operator shall conduct the performance test according to the procedures in 40 CFR 63, Subpart A, and in 40 CFR 63.626.

[40 CFR 63.626(a)(1); PTC No. 029-00003, pg. 20, Permit Condition 3.7, 7/12/00]

2.11 Performance Testing for New Units

As required by 40 CFR 63.7(a)(2) and once per annum thereafter, each owner or operator of a phosphate fertilizer production plant subject to the provisions of 40 CFR 63, Subpart BB shall conduct a performance test to demonstrate compliance with the applicable emission standard for each new diammonium and/or monoammonium phosphate process line. The owner or operator shall conduct the performance test according to the procedures in 40 CFR 63, Subpart A and in 40 CFR 63.626.

[40 CFR 63.626(a)(2); PTC No. 029-00003, pg. 20, Permit Condition 3.8, 7/12/00]

2.12 Performance Test Methods

In conducting performance tests, each owner or operator of an affected source shall use as reference methods and procedures the test methods in 40 CFR 60, Appendix A, or other methods and procedures as specified in 40 CFR 63.626, except as provided in 40 CFR 63.7(f).

[40 CFR 63.626(b); PTC No. 029-00003, pg. 20, Permit Condition 3.9, 7/12/00]

2.13 Performance Testing - Fluorides

Each owner or operator of a new or existing diammonium and/or monoammonium phosphate process line shall determine compliance with the applicable total fluorides standards in 40 CFR 63.622 or 63.623, as specified in 2.13.1.

2.13.1 (1) The emission rate (E) of total fluorides shall be computed for each run using the following equation:

$$E = \left(\sum_{i=1}^{N} C_{si} Q_{sdi} \right) \Big/ (PK)$$

Where:

E = emission rate of total fluorides, g/metric ton (lb/ton) of equivalent P_2O_5 feed.
C_{si} = concentration of total fluorides from emission point "i," mg/dscm (mg/dscf).
Q_{sdi} = volumetric flow rate of effluent gas from emission point "i," dscm/hr (dscf/hr).
N = number of emission points associated with the affected facility.
P = equivalent P_2O_5 feed rate, metric ton/hr (ton/hr).
K = conversion factor, 1000 mg/g (453,600 mg/lb).

(2) Method 13A or 13B (40 CFR 60, Appendix A) shall be used to determine the total fluorides concentration (C_{si}) and volumetric flow rate (Q_{sdi}) of the effluent gas from each of the emission points. If Method 13 B is used, the fusion of the filtered material described in Permit Condition 7.3.1.2 and the distillation of suitable aliquots of containers 1 and 2, described in Permit Conditions 7.3.3 and 7.3.4 in Method 13 A, may be omitted. The sampling time and sample volume for each run shall be at least one hour and 0.85 dscm (30 dscf).

(3) The equivalent P_2O_5 feed rate (P) shall be computed using the following equation:

$$P = M_p R_p$$

Where:

M_p = total mass flow rate of phosphorus-bearing feed, metric ton/hr (ton/hr).
R_p = P_2O_5 content, decimal fraction.

(i) The accountability system described in 40 CFR 63.625(a) and (b) shall be used to determine the mass flow rate (M_p) of the phosphorus-bearing feed.

(ii) The P_2O_5 content (R_p) of the feed shall be determined using as appropriate the following methods (incorporated by reference -- see 40 CFR 63.14) specified in the Book of Methods Used and Adopted By The Association Of Florida Phosphate Chemists, Seventh Edition 1991, where applicable:

(A) Section IX, Methods of Analysis for Phosphate Rock, No. 1 Preparation of Sample.

(B) Section IX, Methods of Analysis for Phosphate Rock, No. 3 Phosphorus -- P_2O_5 or $Ca_3(PO_4)_2$, Method A - Volumetric Method.

(C) Section IX, Methods of Analysis For Phosphate Rock, No. 3 Phosphorus- P_2O_5 or $Ca_3(PO_4)_2$, Method B - Gravimetric Quimociac Method.

(D) Section IX, Methods of Analysis For Phosphate Rock, No. 3 Phosphorus- P_2O_5 or $Ca_3(PO_4)_2$, Method C - Spectrophotometric Method.

(E) Section XI, Methods of Analysis For Phosphoric Acid, Superphosphate, Triple superphosphate, and Ammonium Phosphates, No. 3 Total Phosphorus- P_2O_5, Method A -Volumetric Method.

(F) Section XI, Methods of Analysis For Phosphoric Acid, Superphosphate, Triple Superphosphate, and Ammonium Phosphates, No. 3 Total Phosphorus- P_2O_5, Method B - Gravimetric Quimociac Method.

(G) Section XI, Methods of Analysis for Phosphoric Acid, Superphosphate, Triple Superphosphate, and Ammonium Phosphates, No. 3 Total Phosphorus-P_2O_5, Method C - Spectrophotometric Method.

(4) To comply with 40 CFR 63.625(f)(1) or (2), the owner or operator shall use the monitoring systems in 40 CFR 63.625(c) to determine the average pressure loss of the gas stream across each scrubber in the process scrubbing system and to determine the average flow rate of the scrubber liquid to each scrubber in the process scrubbing system during each of the total fluoride runs. The arithmetic averages of the three runs shall be used as the baseline average values for the purposes of 40 CFR 63.625(f)(1) or (2).

[40 CFR 63.626(c); PTC No. 029-00003, pg. 20, Permit Condition 3.10, 7/12/00]

2.14 Operations and Maintenance Manual Requirements

Within 60 days after startup, the permittee shall have developed an O&M manual for the Urea Storage Baghouse, which describes the procedures that will be followed to comply with Permit Condition 2.23 and the air pollution control device requirements contained in this permit. The manual shall remain onsite at all times and shall be available to Department representatives upon request.

[IDAPA 58.01.01.211.01, 5/1/94; PTC No. 029-00003, pg. 21, Permit Condition 3.11, 7/12/00]

2.15 Each owner or operator subject to the requirements of 40 CFR 63, Subpart BB shall comply with the recordkeeping requirements in 40 CFR 63.10. Requirements are included in Appendix A of this permit.

[40 CFR 63.627(b)]

2.16 Performance Test - Particulate Matter

The permittee shall conduct a compliance test on P-Fa-1/2, and P-Fa-3 in accordance with the procedures outlined in 40 CFR 60, Appendix A, Method 5, or a Department-approved alternative method, within 180 days of issuance of the permit.

If the particulate matter emission rate measured in the initial compliance test is less than or equal to 75% of the emission standard in Permit Condition 2.2, no further testing shall be required during the permit term. The process weight measured during the compliance test shall be PW in the equation. If the particulate matter emission rate measured during the compliance test is greater than 75%, but less than or equal to 90%, of the emission standard in Permit Condition 2.2, a second test shall be required in the third year of the permit term. If the particulate matter emission rate measured during the compliance test is greater than 90% of the emission standard in Permit Condition 2.2, the permittee shall conduct a compliance test annually.

[IDAPA 58.01.01.322.09, 5/1/94]

Reporting

2.17 Maximum Achievable Control Technology Performance Test Report

In accordance with 40 CFR 63.627(c), the owner or operator of an affected source shall comply with the reporting requirements specified in 40 CFR 63.10 as follows:

[40 CFR 63.627(c); PTC No. 029-00003, pg. 21, Permit Condition 4.1, 7/12/00]

2.17.1 Performance Test Report

As required by 40 CFR 63.10, the owner or operator shall report the results of the initial and annual performance tests as part of the notification of compliance status required in 40 CFR 63.9.

[40 CFR 63.627(c)(1)]

2.17.2 Excess Emissions Report

As required by 40 CFR 63.10, the owner or operator of an affected source shall submit an excess emissions report for any exceedance of an operating parameter limit. The report shall contain the information specified in 40 CFR 63.10. When no exceedances of an operating parameter have occurred, such information shall be included in the report. The report shall be submitted semiannually and shall be delivered or postmarked by the 30th day following the end of the calendar half. If exceedances are reported, the owner or operator shall report quarterly until a request to reduce reporting frequency is approved, as described in 40 CFR 63.10.

[40 CFR 63.627(c)(2)]

2.17.3 Summary Report

If the total duration of control system exceedances for the reporting period is less than 1% of the total operating time for the reporting period, the owner or operator shall submit a summary report containing the information specified in 40 CFR 63.10 rather than the full excess emissions report, unless required by the Administrator. The summary report shall be submitted semiannually and shall be delivered or postmarked by the 30th day following the end of the calendar half.

[40 CFR 63.627(c)(3)]

2.17.4 If the total duration of control system operating parameter exceedances for the reporting period is 1% or greater of the total operating time for the reporting period, the owner or operator shall submit a summary report and the excess emissions report.

[40 CFR 63.627(c)(4)]

2.18 Each owner or operator subject to the requirements of 40 CFR 63, Subpart BB shall comply with notification requirements in 40 CFR 63.9. Requirements are included in Appendix A of this permit.

[40 CFR 63.627(a)]

Phosphate Fertilizers Production Plant MACT Compliance Dates

2.19 Each owner or operator of an existing affected source at a phosphate fertilizers production plant shall achieve compliance with the requirements of 40 CFR 63, Subpart BB no later than June 10, 2002. Notwithstanding the requirements of 40 CFR 63.7(a)(2)(iii), each owner or operator of an existing affected source at a phosphate fertilizers production plant shall fulfill the applicable requirements of 40 CFR 63.626 no later than June 10, 2002.

[40 CFR 63.630(a)]

2.20 Each owner or operator of a phosphate fertilizers production plant that commences construction or reconstruction of an affected source after December 27, 1996 shall achieve compliance with the requirements of 40 CFR 63, Subpart BB upon startup of operations or by June 10, 1999, whichever is later.

[40 CFR 63.630(b)]

Phosphate Fertilizers Production Plant Exemption From New Source Performance Standards

2.21 Any affected source subject to the provisions of 40 CFR 63, Subpart BB is exempted from any otherwise applicable new source performance standard contained in 40 CFR 60, Subpart V, Subpart W, or Subpart X. To be exempt, a source must have a current operating permit pursuant to Title V of the Act and the source must be in compliance with all requirements of 40 CFR 63, Subpart BB. For each affected source, this exemption is effective upon the date that the owner or operator demonstrates to the Administrator that the requirements of 40 CFR 63.624, 63.625 and 63.626 have been met.

[40 CFR 63.631]

Applicability of MACT General Provisions

2.22 The owner or operator shall comply with the requirements of the general provisions in 40 CFR 63, Subpart A as shown in Appendix A to 40 CFR 63, Subpart BB. Requirements are included in Appendix A of this permit.

[40 CFR 63.628; PTC No. 029-00003, Permit Condition 2.2, 7/12/00]

PTC General Provisions

2.23 The permittee shall at all times (except as provided in the *Rules*) maintain in good working order and operate as efficiently as practicable, all treatment or control facilities or systems installed or used to achieve compliance with the terms and conditions of this permit and other applicable Idaho laws for the control of air pollution.

[PTC No. 029-00003, General Provision B, 7/12/00]

2.24 The maximum allowable operating rate shall be limited to 120% of the average operating rate attained during any performance test period, for which a test protocol has been granted prior approval by DEQ, unless (1) the test demonstrates noncompliance; (2) a more restrictive operating limit is specified elsewhere in this permit; or (3) at such an operating rate, emissions would exceed any emissions limit(s) set forth in this permit.

[PTC No. 029-00003, General Provision F, 7/12/00]

3. DRY PRODUCT TRANSFER, STORAGE, AND LOADOUT

Summary Description

The following is a narrative description of the dry product transfer, storage, and loadout process regulated in this Tier I operating permit. This description is for informational purposes only.

Dry fertilizer from the granulation plant is conveyed to the shipping warehouse and stored until time to ship to customers. The warehouse holds approximately 60,000 tons of dry fertilizer products. Front-end loaders are used to transfer the product from the piles inside the warehouse to the feeders and conveyers. The fertilizer products are screened for size and loaded into railcars or trucks.

Table 3.1 describes the devices used to control dry product transfer, storage, and loadout.

Table 3.1 EMISSIONS UNITS AND EMISSIONS CONTROL DEVICES

Source Code	Emission Unit(s) / Process(es)	Emission Control Device
F-Fb-1	Dry product transfer	Enclosure
F-Fb-2	Dry product storage	Enclosure
F-Fc-1	Dry product loadout	Chemical dust suppressant

Table 3.2 contains only a summary of the requirements that apply to the dry product transfer, storage, and loadout process. Specific permit requirements are listed below Table 3.2.

Table 3.2 APPLICABLE REQUREMENTS SUMMARY

Permit Condition	Parameter	Permit Limit / Standard Summary	Applicable Requirements Reference	Monitoring and Recordkeeping Requirements
3.1	Particulate matter	Process weight	IDAPA 58.01.01.702	None

Permit Limits / Standard Summary

3.1 PM - Process Weight Rate Limitations

No person shall emit into the atmosphere from any process or process equipment operating prior to October 1, 1979, particulate matter in excess of the amount shown by the following equations, where E is the allowable emission from the entire source in pounds per hour, and PW is the process weight in pounds per hour.

a. If PW is less than 17,000 lb/hr,

$$E = 0.045(PW)^{0.6}$$

b. If PW is equal to or greater than 17,000 lb/hr,

$$E = 1.12(PW)^{0.27}$$

[IDAPA 58.01.01.702, 4/5/00]

Monitoring & Recordkeeping Requirements

3.2 None. The process is inherently in compliance. See the technical memorandum for explanation.

4. EAST SULFURIC ACID PLANT

Summary Description

The following is a narrative description of the east sulfuric acid plant regulated in this Tier I operating permit. This description is for informational purposes only.

Approximately 50% of the sulfuric acid utilized at the Agrium Conda Phosphate Plant is currently manufactured by Nu-West at the east sulfuric acid plant using a dual absorption contact process that burns elemental sulfur. The other 50% of the sulfuric acid used at the facility is purchased from a third party source.

Table 4.1 describes the devices used to control emissions from east sulfuric acid plant.

Table 4.1 EMISSIONS UNITS AND EMISSIONS CONTROL DEVICES

Source Code	Emission Unit(s) / Process(es)	Emission Control Device
S-Se-1	East sulfuric acid plant	Dual absorption contact process

Table 4.2 contains only a summary of the requirements that apply to the east sulfuric acid plant. Specific permit requirements are listed below Table 4.2.

Table 4.2APPLICABLE REQUIREMENTS SUMMARY

Permit Conditions	Parameter	Permit Limit / Standard Summary	Applicable Requirements Reference	Operating, Monitoring and Recordkeeping Requirements
4.1	Sulfur dioxide emissions	4 pounds per ton of sulfuric acid production 258 lb/hr 945 T/yr 28 pounds per ton of 100% sulfuric acid production	40 CFR 60.82 [1] PTC No. 029-00003, Permit Condition 1.1, 4/27/00 IDAPA 58.01.01.845	4.5, 4.6, 4.7, 4.8, 4.10, 4.12, 4.13, 4.14, 4.15
4.2	Sulfuric acid mist emissions	0.15 pounds per ton of sulfuric acid production	40 CFR 60.83	4.7, 4.10, 4.12, 4.13, 4.14
4.3	Visible emissions	10% opacity	40 CFR 60.83	4.7, 4.10, 4.12, 4.13
4.4	Particulate matter	Process weight	IDAPA 58.01.01.701	4.9, 4.11, 4.12, 4.13

[1] If any requirement in this permit conflicts with any requirement contained in 40 CFR 60 the requirement in 40 CFR 60 shall control.

Permit Limits / Standard Summary

4.1 Sulfur Dioxide Emissions from the East Sulfuric Acid Plant

4.1.1 Sulfur dioxide emissions shall not exceed four pounds per ton of 100% sulfuric acid production, as specified in 40 CFR 60.82(a). Compliance with this limit will also demonstrate compliance with the sulfur dioxide emission limit contained in IDAPA 58.01.01.845 (28 pounds SO_2 per ton of 100% sulfuric acid production).

4.1.2 Sulfur dioxide emissions shall not exceed 258 lb/hr and 945 tons SO_2/yr.
[40 CFR 60.82; IDAPA 58.01.01.845, 5/1/94; PTC No. 029-00003, Permit Condition 1.1, 4/27/00]

4.2 Sulfuric Acid Mist Emissions from the East Sulfuric Acid Plant

Sulfuric acid mist emissions from the east sulfuric acid plant shall not exceed 0.15 lb per ton of 100% sulfuric acid production, as specified in 40 CFR 60.83(a)(1).
[40 CFR 60.83; PTC No. 029-00003, Permit Condition 1.2, 4/27/00]

4.3 Visible Emission Limits

Visible emission limits from the east sulfuric acid plant shall not exceed 10% opacity as specified in 40 CFR 60.83(a)(2).
[40 CFR 60.83; PTC No. 029-00003, Permit Condition 1.3, 4/27/00]

4.4 PM - Process Weight PM Emissions Limitations

No person shall emit into the atmosphere from any process or process equipment commencing operation on or after October 1, 1979, particulate matter in excess of the amount shown by the following equations, where E is the allowable emission from the entire source in pounds per hour, and PW is the process weight in pounds per hour.

a. If PW is less than 9,250 lb/hr,

$$E = 0.045(PW)^{0.6}$$

b. If PW is equal to or greater than 9,250 lb/hr,

$$E = 1.10(PW)^{0.25}$$

[IDAPA 58.01.01.701, 4/5/00]

Operating Requirements

4.5 Production Rate

The east sulfuric acid plant shall have a maximum daily production rate of 1,550 tons per day.
[PTC No. 029-00003, Permit Condition 2.1, 4/27/00]

4.6 Hours of Operation

The facility shall not exceed 8,400 hours of operation per year, as per applicant's submittal.

[PTC No. 029-00003, Permit Condition 2.2, 4/27/00]

Monitoring & Recordkeeping Requirements

4.7 Annual Performance Tests

4.7.1 Annual sulfur dioxide and sulfuric acid mist emission tests shall be performed using EPA Reference Methods 1, 2, 3, and 8, or Department approved alternative methods. All emission tests shall be performed at the process equipment's maximum operating capacity.

4.7.2 Subsequent annual sulfur dioxide and sulfuric acid mist tests shall be performed within 13 months of the previous annual test.

4.7.3 Visible Emissions shall be observed and recorded with the emissions test required in Permit Condition 4.7, using EPA Reference Method 9. A minimum of 24 observations shall be recorded.

4.7.4 The maximum production during the following year shall not exceed 105% of the rate achieved during the tests unless the following conditions are met:

4.7.4.1 The sulfur dioxide monitor is calibrated at least once every 24 hours using certified test gases, one of which has a sulfur dioxide concentration equal or less than the expected stack gas sulfur dioxide concentration, and one of which has a sulfur dioxide concentration greater than the expected stack gas sulfur dioxide concentration.

4.7.4.2 The calibrated sulfur dioxide monitor is cross-checked and agrees with the initial performance test, which demonstrates sulfur dioxide emission limit compliance.

4.7.4.3 Prior written approval by Department is received.

4.7.4.4. An emission test is performed at the requested increased production rate, and the test demonstrates that the continuous emission monitor is accurate at the increased rate.

4.7.4.5 Sulfur dioxide and acid mist emission limits will not be violated at the requested increased production rate.

[PTC No. 029-00003, Permit Condition 3.1, 4/27/00]

4.8 CEMS Requirement

4.8.1 A continuous monitoring system for the measurement of sulfur dioxide shall be installed, calibrated, maintained, and operated by the owner or operator. The pollutant gas used to prepare calibration gas mixtures under Performance Specification 2 and for calibration checks under 60.13(d), shall be sulfur dioxide (SO_2). Method 8 shall be used for conducting monitoring system performance evaluations under 60.13(c) except that only the sulfur dioxide portion of the Method 8 results shall be used. The span value shall be set at 1000 ppm of sulfur dioxide.

4.8.2 The owner or operator shall establish a conversion factor for the purpose of converting monitoring data into units of the applicable standard (kg/metric ton, lb/ton). The conversion factor shall be determined, as a minimum, three times daily by measuring the concentration of sulfur dioxide entering the converter using suitable methods (e.g., the Reich test, National Air Pollution Control Administration Publication No. 999-AP-13) and calculating the appropriate conversion factor for each 8-hour period as follows:

$$CF = k[(1.000 - 0.015r) / (r - s)]$$

where:

CF = conversion factor (kg/metric ton per ppm, lb/ton per ppm).

k = constant derived from material balance. For determining CF in metric units, k = 0.0653. For determining CF in English units, k = 0.1306.

r = percentage of sulfur dioxide by volume entering the gas converter. Appropriate corrections must be made for air injection plants subject to the Administrator's approval.

s= percentage of sulfur dioxide by volume in the emissions to the atmosphere determined by the continuous monitoring system required under Permit Condition 4.8.1.

4.8.3 The owner or operator shall record all conversion factors and values under Permit Condition 4.8.2 from which they were computed (i.e., CF, r, and s).

4.8.4 Alternatively, a source that processes elemental sulfur or an ore that contains elemental sulfur and uses air to supply oxygen may use the following continuous emission monitoring approach and calculation procedures in determining SO_2 emission rates in terms of the standard. This procedure is not required, but is an alternative that would alleviate problems encountered in the measurement of gas velocities or production rate. Continuous emission monitoring systems for measuring SO_2, O_2, and CO_2 (if required) shall be installed, calibrated, maintained, and operated by the owner or operator and subjected to the certification procedures in Performance Specifications 2 and 3. The calibration procedure and span value for the SO_2 monitor shall be as specified in paragraph (b) of this section. The span value for CO_2 (if required) shall be 10% and for O_2 shall be 20.9% (air). A conversion factor based on process rate data is not necessary. Calculate the SO_2 emission rate as follows:

$$Es = (C_s S)/[0.265 - (0.126\ \%O_2) - (A\ \%CO_2)]$$

where:

Es = emission rate of SO_2, kg/metric ton (lb/ ton) of 100% of H_2SO_4 produced.

Cs = concentration of SO_2, kg/dscm (lb/dscf).

S = acid production rate factor, 368 dscm/metric ton (11,800 dscf/ton) of 100% H_2SO_4 produced.

% O_2 = oxygen concentration, percent dry basis.

A = auxiliary fuel factor,

= 0.00 for no fuel.

= 0.0226 for methane.

= 0.0217 for natural gas.

= 0.0196 for propane.

= 0.0172 for No 2 oil.

= 0.0161 for No 6 oil.

= 0.0148 for coal.

= 0.0126 for coke.

% CO_2 = carbon dioxide concentration, percent dry basis.

NOTE: It is necessary in some cases to convert measured concentration units to other units for these calculations. Use the following table for such conversions:

From	To	Multiply by
g/scm	kg/scm	10^{-3}
mg/scm	kg/scm	10^{-6}
ppm (SO_2)	kg/scm	2.660×10^{-6}
ppm (SO_2)	lb/scf	1.660×10^{-7}

4.8.5 For the purpose of reports under 40 CFR 60.7(c), periods of excess emissions shall be all three-hour periods (or the arithmetic average of three consecutive one-hour periods) during which the integrated average sulfur dioxide emissions exceed the applicable standards under 40 CFR 60.82.

[40 CFR 60.84; PTC No. 029-00003, Permit Condition 3.2, 4/27/00]

4.9 Production and Operating Hours Monitoring

The permittee shall monitor and record the production and the hours of operation of the east sulfuric acid plant on a monthly basis.

[PTC No. 029-00003, Permit Condition 3.3, 4/27/00, IDAPA 58.01.01.322.06]

4.10 Test Methods and Procedures

4.10.1 In conducting the performance tests required in 40 CFR 60.8, the owner or operator shall use as reference methods and procedures the test methods in Appendix A of 40 CFR 60 or other methods and procedures as specified in this section, except as provided in 40 CFR 60.8(b). Acceptable alternative methods and procedures are given in paragraph 4.10.3.

4.10.2 The owner or operator shall determine compliance with the SO_2, acid mist, and visible emission standards in Permit Conditions 4.1, 4.2, and 4.3 (60.82 and 60.83) as follows:

(1) The emission rate (E) of acid mist or SO_2 shall be computed for each run using the following equation:

$$E = (CQ_{sd})/(PK)$$

where:

E = emission rate of acid mist or SO_2 kg/metric ton (lb/ton) of 100 % H_2SO_4 produced.
C = concentration of acid mist or SO_2, g/dscm (lb/dscf).
Q_{sd} = volumetric flow rate of the effluent gas, dscm/hr (dscf/hr).
P = production rate of 100 % H_2SO_4, metric ton/hr (ton/hr).
K = conversion factor, 1000 g/kg (1.0 lb/lb).

(2) Method 8 shall be used to determine the acid mist and SO_2 concentrations (C's) and the volumetric flow rate (Q_{sd}) of the effluent gas. The moisture content may be considered to be zero. The sampling time and sample volume for each run shall be at least 60 minutes and 1.15 dscm (40.6 dscf).

(3) Suitable methods shall be used to determine the production rate (P) of 100% H_2SO_4 for each run. Material balance over the production system shall be used to confirm the production rate.

(4) Method 9 and the procedures in 40 CFR 60.11 shall be used to determine opacity.

4.10.3 The owner or operator may use the following as alternatives to the reference methods and procedures specified in this section:

(i) If a source processes elemental sulfur or an ore that contains elemental sulfur and uses air to supply oxygen, the following procedure may be used instead of determining the volumetric flow rate and production rate:

(ii) The integrated technique of Method 3 is used to determine O_2 concentration and, if required, CO_2 concentration.

(iii) The SO_2 or acid mist emission rate is calculated as described in 40 CFR 60.84(d), substituting the acid mist concentration for C(s) as appropriate.

[40 CFR 60.85]

4.11 Performance Test - Particulate Matter

The permittee shall conduct a compliance test on the emissions from S-Se-1 in accordance with the procedures outlined in 40 CFR 60, Appendix A, Method 5, or a Department-approved alternative method, within 180 days of issuance of the permit.

If the particulate matter emission rate measured in the initial compliance test is less than or equal to 75% of the emission standard in Permit Condition 4.4, no further testing shall be required during the permit term. The process weight measured during the compliance test shall be PW in the equation. If the particulate matter emission rate measured during the compliance test is greater than 75%, but less than or equal to 90%, of the emission standard in Permit Condition 4.4, a second test shall be required in the third year of the permit term. If the particulate matter emission rate measured during the compliance test is greater than 90% of the emission standard in Permit Condition 4.4, the permittee shall conduct a compliance test annually.

[IDAPA 58.01.01.322.09, 5/1/94]

Reporting

4.12 Annual Performance Test Protocol

The permittee shall submit for approval to DEQ a source test protocol for the tests required in Permit Condition 4. The test protocol shall be submitted to DEQ no later than 30 days prior to the date of the initial performance test. Once DEQ approves the test protocol, the permittee shall conduct all subsequent source tests in accordance with the approved protocol. The permittee may submit a new test protocol for review and approval in the event that there is any change in the protocol. The new test protocol shall be approved by DEQ prior to any testing in accordance with the new protocol.

[PTC No. 029-00003, Permit Condition 4.1, 4/27/00]

4.13 Performance Test Results

The data and results of all emissions tests shall be reported to DEQ within 30 days of the completion of the tests. The report shall also include continuous emission monitoring data, production rates, and visible emissions data.

[PTC No. 029-00003, Permit Condition 4.2, 4/27/00]

4.14 Sulfur Dioxide Emissions Report

All three-hour running average sulfur dioxide emissions and quarterly emissions of sulfuric acid mist shall be reported to Department in a calendar-quarterly report. The quarterly emissions of sulfuric acid mist shall be calculated by using the most recent source test emission factor multiplied by the production rate. The report shall be received by DEQ no later than 30 days after each calendar quarter.

[PTC No. 029-00003, Permit Condition 4.3, 4/27/00]

4.15 CEMS Report

All repairs or changes to the continuous emissions monitoring systems (CEMS) and any calibration problem shall be reported to DEQ within seven days and shall be included in the quarterly report.

[PTC No. 029-00003, Permit Condition 4.4, 4/27/00]

PTC General Provisions

4.16 The permittee shall at all times (except as provided in the *Rules*) maintain in good working order and operate as efficiently as practicable, all treatment or control facilities or systems installed or used to achieve compliance with the terms and conditions of this permit and other applicable Idaho laws for the control of air pollution.

[PTC No. 029-00003, General Provision B, 4/27/00]

4.17 The maximum allowable operating rate shall be limited to 120% of the average operating rate attained during any performance test period, for which a test protocol has been granted prior approval by DEQ, unless (1) the test demonstrates noncompliance; (2) a more restrictive operating limit is specified elsewhere in this permit (see Permit Condition 4.7 above); or (3) at such an operating rate, emissions would exceed any emissions limit(s) set forth in this permit.

[PTC No. 029-00003, General Provision F, 4/27/00]